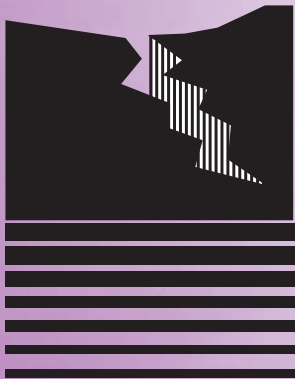


# **School Curriculum**

## **Teaching Children About Earthquakes and How to Protect Themselves**

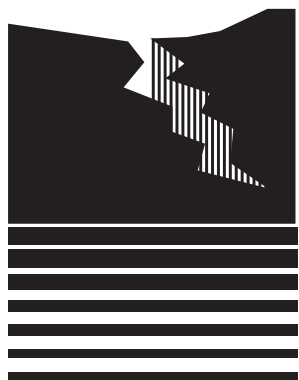


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## WASHINGTON MILITARY DEPARTMENT



## EMERGENCY MANAGEMENT DIVISION

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# School Curriculum

## Activity One: What is an Earthquake?

### Materials

- An audiovisual cart on wheels, or a small table or desk that moves easily
- A shallow box partially filled with sand or soil
- An assortment of paper plates, cups and small boxes that can be stacked to represent a building

### Procedure

#### 1. Introduce the topic with a discussion based on the following questions:

- What does the word “quake” mean?
- What do we mean when we say people are “quaking in their boots?” Invite students to imitate a person trembling.
- Have you ever been on a bridge when it shook from heavy traffic, or near the railroad tracks when a train passed over? Invite students to demonstrate shaking and vibrating.

- What do you suppose is happening to the earth when there is an earthquake?

#### 2. Allow students time to express their observations and feelings.

#### 3. Tell students they are going to make a model to demonstrate what happens during an earthquake. Follow these steps:

- Invite a small group of students to pile paper plates, cups and small boxes on top of each other in the box filled with sand to form a tall structure.
- Place the box on the cart, table, or desk.
- Shake the cart, table or desk until the structure topples.

- Ask the students to comment on what they see. Examples:
  - What does the sand or soil represent? (The earth)
  - What do the plates, cups or boxes represent? (A tall building)
  - What moves? (The earth and the building)
  - What happens to the building? (Various degrees of damage)
  - What would happen to people in or near the building? (They would be frightened and possibly hurt)



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## Activity Two: “Drop, Cover and Hold” Drill

### Procedure

1. Explain that you are going to talk about an imaginary earthquake to help students understand what might happen during a real one.

Call out, “**Earthquake! Drop, Cover and Hold,**” and direct students to practice the following actions:

- a. Get under a table or desk.
- b. Turn away from the windows.
- c. Put a hand on the back of your neck.
- d. Tuck your head down.
- e. Hold on to the legs of the table or desk and be prepared to move with it.

2. Appoint student helpers for the simulation. Ask one student to flick the lights on and off several times, and then turn them off. Appoint another to act as timer for this activity. Designate students to help create earthquake sound effects, such as:

- a. Rattling glass
- b. Scraping desks
- c. Scraping tables

- d. Opening drawers
  - e. Barking dogs
  - f. Meowing cats
  - g. Books falling
  - h. Trees scraping the building
  - i. People shouting
  - j. Babies crying
  - k. Bricks falling (drop several pencils)
  - l. Doors banging shut
  - m. Hanging plant falling (drop an unbreakable dish or pan)
3. Read the earthquake simulation script. Direct the students to follow the “**Earthquake! Drop, Cover and Hold**” instructions during the simulation, while helpers provide effects as indicated. Repeat the simulation a second time, selecting different students to provide the effects, so that each student has an opportunity to practice the “**Earthquake! Drop, Cover and Hold**” procedure.
  4. Take time after the simulation to let students respond to the experience. Encourage them to ask

questions and discuss their fears and concerns, including the unpleasant, worried and frightened feelings that they might experience

### Teacher Note:

We do not recommend excusing children with special needs from participating in earthquake drills. Children who are blind, deaf or have impaired mobility especially need experiences which build confidence in their ability to avoid and cope with dangers. Plan with parents, other teachers and the school nurse to determine quake-safe actions for these children.

It may not be possible for children with impaired mobility to get under a desk or table. They can, however, learn to react quickly and turn away from windows; move away from light fixtures and unsecured bookcases; and use their arms or whatever is handy to protect their heads. If the child is wheelchair confined, you might suggest attaching a hard hat on the wheelchair that is accessible to the child if the ground starts shaking.

**Continued next page**

## **Activity Two: “Drop, Cover and Hold” Drill ( continued)**

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### **Earthquake Simulation Script**

**Imaging that you hear a low, rumbling, roaring sound. The noise builds, getting louder and louder for about 10 seconds. Then, Wham! There’s a terrific jolt. You feel like someone suddenly slammed on the brakes in the car, or like a truck just rammed into the side of the building.**

**The floor seems to be moving beneath you. It’s hard to stand up, or even stay in your seat. If you do stand up, you might feel like you’re riding a raft down a fast river. When you walk, it’s like trying to walk on a trampoline or a waterbed. You hear someone say, “Earthquake! Drop, Cover and Hold!”**

**I want all of you at your desks to take cover as quickly and quietly as you can, right now. Please listen very carefully.**

**The shaking and commotion may last about 60 seconds or a little longer. We’ll have our timer count off the seconds for as long as this earthquake lasts. (The timer may begin counting softly now.)**

**The building is creaking and rattling. Books are falling from the bookcase. Hanging lamps and plants are swaying. Suddenly a pot falls to the floor and smashes, and the plant spills. A window-pane just shattered, and glass is falling to the floor. The table is sliding, too.**

**Be sure to stay in the Drop, Cover and Hold position under your desk. If your desk is moving, hold onto the legs and move with it.**

**You hear noises outside. Dogs are barking. Cats are meowing. A baby is crying. People are shouting and screaming. The shaking is making church bells ring. You hear crashing sounds, from brick chimneys and other loose parts of the building falling to the ground. Trees outside are swaying and scraping against the walls.**

**Inside the room, pictures are moving on their nails. Oh! That one just fell off the wall and crashed to the floor. The desk drawers are sliding open. The lights begin to flicker on and offÖ they just went out! Now the door swings back and forth on its hinges. Bang! It slams shut. There’s silence now. Just as suddenly as the noise and shaking began, the room grows quiet. (The timer can stop counting now.)**

**Please, everyone, get back in your seats. It is important to remain very quiet and wait for instructions. If it is safe to leave the building, I am going to lead you outside to an open space. Stay together, and be ready to take cover again at any moment because the shaking may start again. Sometimes other quakes, called aftershocks, begin after the first earthquake has stopped.**

# School Curriculum

## Activity Three: Create an Emergency Kit



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### Materials

- Inexpensive backpack or container
- Art supplies
- Writing paper and pencils
- Items for the kit (will vary)

### Procedure

1. Tell students that they are going to assemble an easy-to-carry kit that can be kept in the classroom for emergencies. Ask them to suggest appropriate containers, or show them an inexpensive backpack obtained for this purpose.

2. Divide the class into teams and assign responsibilities to each team. Roles might include:

- **Decorators:** Design and produce a logo or other distinctive decoration and fasten it to the kit.

- **List makers:** Make a list of items that would be needed after a disaster. Copy the list from the board, neatly and with correct spelling, and fasten it to the inside or outside of the container as a checklist. Also provide a copy to the suppliers.

- **Suppliers:** Decide which items on the list are already in the classroom, which will have to be purchased, and which can be brought from home. With your help, arrange for supplies to be purchased or brought in to the classroom.

### ■ Essential items for the kit will include:

- Bottled water and cups
- Class roster with student's names and addresses
- Flashlight and extra batteries
- AM/FM battery-operated radio with extra batteries

- Paper and pens
- Permanent marker
- Games
- Hard candy
- Non-perishable food products
- Trash bags (for use as rainwear, ground cloths, and for sanitary needs)
- Whistle
- Plastic utensils (depending on the food products in the kit)
- First aid supplies

3. Invite the school nurse or someone from your local fire department or Red Cross to discuss first aid procedures.
4. When the kit is completed, decide where to keep it. Explain that you will carry the kit during evacuation drills or actual evacuations.